

CLAIMS

1. A method of sharing resources between a plurality of devices (52,54,56,58), each one of the devices being provided in a first association of devices or a second association of devices and each having an internal identifier for identifying the device within its association for the purpose of delivering communications to that device, wherein, when a device (52) within the first association of devices sends a communication relating to the provision of resources to a device (58) in the second association of devices, that communication is provided with an external identifier for enabling that communication to be received by the second association of devices.
2. The method of claim 1, wherein communications between the first association of devices and the second association of devices is transmitted via a communication network (66,68).
3. The method of claim 2, wherein the external identifier identifies the second association of devices to the communication network and enables the communication associated with the external identifier to be delivered to the second association of devices via the communication network.
4. The method of claim 3, wherein the communication associated with the external identifier comprises the internal identifier of the device within the first association of the devices from which that communication originated.
5. The method of claim 3 or 4, wherein the communication associated with the external identifier comprises the internal identifier of the relevant device in the second association of devices.

6. The method of any one of claims 2 to 5, wherein the external identifier comprises a first portion which uniquely identifies the first association of devices to the communication network and a second portion which uniquely identifies the association of second devices to the communication network.
7. The method of claim 6, wherein the first portion of the external identifier enables the communication to be transmitted via the communication network to a processing node, which processing node enables the external identifier to subsequently be forwarded to the second association of devices in dependence upon the second portion of the external identifier.
8. The method of any one of claims 2 to 7, wherein the communication network comprises the Internet and the external identifier enables the determination of a unique IP address of the second association of devices and/or the first association of devices.
9. The method of claim 1, wherein the external identifier identifies the second association of devices and enables the external identifier to be delivered to the second association of devices.
10. The method of claim 1, wherein the external identifier identifies the relevant device in the second association of devices.
11. The method of any one of the preceding claims, wherein the first association of devices comprises a plurality of devices, and wherein one of those devices comprises a gateway device through which the communication relating to the provision of resources by a device in a second association of devices is routed.

12. The method of claim 11, wherein the gateway device receives said communication relating to the provision of resources by a device in the second association of devices and provides that communication with the external identifier for enabling that communication to be received by the relevant device in the second association of devices.
13. The method of claim 11 or 12, wherein the gateway device receives a reply communication from the second association of devices relating to the provision of resources by a device in the second association of devices and onwardly transmits that reply communication to the one of those devices from which the communication relating to the provision of resources originated.
14. The method of claim 11,12 or 13, wherein each of the devices within the first association of devices willing to provide the resources transmits in a message to the gateway device indicating the resources available, which message is received and stored by the gateway device.
15. The method of claim 14, wherein the or each message stored on the gateway device enables the selection of the or each device willing to provide the resources and the routing of a request for use of those resources to that device.
16. The method of claim 15, wherein that request for use of resources is transmitted via the gateway device.
17. The method of claim 15, wherein the request for use of resources is transmitted directly to another device within the second association of devices.
18. The method of any one of claims 11 to 17, wherein the second association of devices comprises a plurality of devices, and wherein one of those devices

comprises a gateway device corresponding to the gateway device of the first association of devices.

19. A system for allowing the sharing of resources between a plurality of devices (52,54,56,58), each one of the devices being provided in a first association of devices or a second association of devices and each having an internal identifier for identifying the device within its association for the purpose of delivering communications to that device, the system including means for providing a communication from a device (52) within the first association of devices, relating to the provision of resources, to a device (58) in the second association of devices with an external identifier for enabling that communication to be received by the second association of devices.

20. The system of claim 19, wherein communications between the first association of devices and the second association of devices is transmitted via a communication network (66,68).

21. The system of claim 20, wherein the external identifier identifies the second association of devices to the communication network and enables the communication associated with the external identifier to be delivered to the second association of devices via the communication network.

22. The system of claim 21, wherein the communication associated with the external identifier comprises the internal identifier of the device within the first association of the devices from which that communication originated.

23. The system of claim 21 or 22, wherein the communication associated with the external identifier comprises the internal identifier of the relevant device in the second association of devices.

24. The system of any one of claims 20 to 23, wherein the external identifier comprises a first portion which uniquely identifies the first association of devices to the communication network and a second portion which uniquely identifies the association of second devices to the communication network.
25. The system of claim 24, wherein the first portion of the external identifier enables the communication to be transmitted via the communication network to a processing node, which processing node enables the external identifier to subsequently be forwarded to the second association of devices in dependence upon the second portion of the external identifier.
26. The system of any one of claims 20 to 25, wherein the communication network comprises the Internet and the external identifier enables the determination of a unique IP address of the second association of devices and/or the first association of devices.
27. The system of claim 19, wherein the external identifier identifies the second association of devices and enables the external identifier to be delivered to the second association of devices.
28. The system of claim 19, wherein the external identifier identifies the relevant device in the second association of devices.
29. The system of any one of claims 19 to 28, wherein the first association of devices comprises a plurality of devices, and wherein one of those devices comprises a gateway device through which the communication relating to the provision of resources by a device in a second association of devices is routed.
30. The system of claim 29, wherein the gateway device receives said communication relating to the provision of resources by a device in the second

association of devices and provides that communication with the external identifier for enabling that communication to be received by the relevant device in the second association of devices.

31. The system of claim 29 or 30, wherein the gateway device receives a reply communication from the second association of devices relating to the provision of resources by a device in the second association of devices and onwardly transmits that reply communication to the one of those devices from which the communication relating to the provision of resources originated.

32. The system of claim 29,30 or 31, wherein each of the devices within the first association of devices willing to provide the resources transmits in a message to the gateway device indicating the resources available, which message is received and stored by the gateway device.

33. The system of claim 32, wherein the or each message stored on the gateway device enables the selection of the or each device willing to provide the resources and the routing of a request for use of those resources to that device.

34. The system of claim 33, wherein that request for use of resources is transmitted via the gateway device.

35. The system of claim 33, wherein the request for use of resources is transmitted directly to another device within the second association of devices.

36. The system of any one of claims 29 to 35, wherein the second association of devices comprises a plurality of devices, and wherein one of those devices comprises a gateway device corresponding to the gateway device of the first association of devices.

37. An association of devices (52,54) between which resources are shared, wherein each device has an internal identifier for identifying the device within its association for the purpose of delivering communications to that device; and wherein a device within the association of devices is operable to send a communication relating to the provision of resources to a device in a second association of devices (56,58), which communication is provided with an external identifier for enabling that communication to be received by the second association of devices.

38. The association of claim 37, wherein communications between the first association of devices and the second association of devices is transmitted via a communication network (66,68).

39. The association of claim 38, wherein the external identifier identifies the second association of devices to the communication network and enables the communication associated with the external identifier to be delivered to the second association of devices via the communication network.

40. The association of claim 39, wherein the communication associated with the external identifier comprises the internal identifier of the device within the first association of the devices from which that communication originated.

41. The association of claim 39 or 40, wherein the communication associated with the external identifier comprises the internal identifier of the relevant device in the second association of devices.

42. The association of any one of claims 38 to 41, wherein the external identifier comprises a first portion which uniquely identifies the first association of devices to the communication network and a second portion which uniquely identifies the association of second devices to the communication network.

43. The association of claim 42, wherein the first portion of the external identifier enables the communication to be transmitted via the communication network to a processing node, which processing node enables the external identifier to subsequently be forwarded to the second association of devices in dependence upon the second portion of the external identifier.

44. The association of any one of claims 38 to 43, wherein the communication network comprises the Internet and the external identifier enables the determination of a unique IP address of the second association of devices and/or the first association of devices.

45. The association of claim 37, wherein the external identifier identifies the second association of devices and enables the external identifier to be delivered to the second association of devices.

46. The association of claim 37, wherein the external identifier identifies the relevant device in the second association of devices.

47. The association of any one of claims 37 to 46, wherein the first association of devices comprises a plurality of devices, and wherein one of those devices comprises a gateway device through which the communication relating to the provision of resources by a device in a second association of devices is routed.

48. The association of claim 47, wherein the gateway device receives said communication relating to the provision of resources by a device in the second association of devices and provides that communication with the external identifier for enabling that communication to be received by the relevant device in the second association of devices.

49. The association of claim 47 or 48, wherein the gateway device receives a reply communication from the second association of devices relating to the provision of resources by a device in the second association of devices and onwardly transmits that reply communication to the one of those devices from which the communication relating to the provision of resources originated.
50. The association of claim 47,48 or 49, wherein each of the devices within the first association of devices willing to provide the resources transmits in a message to the gateway device indicating the resources available, which message is received and stored by the gateway device.
51. The association of claim 50, wherein the or each message stored on the gateway device enables the selection of the or each device willing to provide the resources and the routing of a request for use of those resources to that device.
52. The association of claim 51, wherein that request for use of resources is transmitted via the gateway device.
53. The association of claim 51, wherein the request for use of resources is transmitted directly to another device within the second association of devices.
54. The association of any one of claims 47 to 53, wherein the second association of devices comprises a plurality of devices, wherein one of those devices comprises a gateway device corresponding to the gateway device of the first association of devices, and wherein the gateway device of the first association of devices adapted to communicate with the gateway device of the second association of devices.

55. A method of enabling the data communication between a plurality of devices (52,54,56,58), the method including enabling communication between the devices via a first communications medium by associating with each device a respective identifier that allows communication from the devices to be received via the first communications medium (60,62); and enabling communications between particular ones of the devices (54,56) via a second communications medium by generating for each of the particular devices a respective further identifier that allows communications to be received via the second communications medium (66,68).

56. The method of claim 55, including enabling communications between respective ones of the devices via the second communications medium by routing communications from one of those devices via the first communications medium to one of the particular devices for onward transmission via the second communications medium.

57. The method of claim 56, wherein the communications received from the one of the devices by the one of the particular devices for onward transmission by the second communications medium includes the identifier associated with the one of the devices.

58. A method of allowing selected devices within the network to be associated in a domain, each device being capable of communicating with the other devices of the domain, the method including adapting one device within the domain to provide each other device with identification data, the identification data of each device being interpretable by each other device within the domain, particular modes of communication only being allowed between devices within the domain having such identification data; and adapting one device within the domain to allow communication between the said devices and other devices associated in another domain.

59. A method of allowing selected devices within the network to be associated in a first and/or a second domain, each device being capable of communicating with the other devices of its domain, the method including:

adapting one device within the first domain to provide each other device in that domain with identification data, the identification data of each device being interpretable by each other device within the domain, particular modes of communication only being allowed between devices within the domain having such identification data;

adapting one device within the second domain to provide each other device in that domain with identification data, the identification data of each device being interpretable by each other device within the domain, particular modes of communication only being allowed between devices within the domain having such identification data; and

adapting one device within the first domain to communicate with one device within the second domain to allow resources provided by the devices within the respective domains to be shared between the respective domains.